

In the Title

Kindly amend the title to read --METHOD AND APPARATUS OF IMAGE SIGNAL PROCESSING-- as set forth on page 1 of the specification.

Amendments to the Specification

Please replace the paragraph beginning at page 2, line 6 with the following rewritten paragraph:

To address the deterioration in image quality due to the difference in afterglow-lasting time, there are some suggestions. For example, with respect to an image signal corresponding to the color emitted by the phosphor having a short afterglow time, an additional image signal (hereinafter referred to as a pseudo afterglow signal) is generated, and the pseudo afterglow signal is added to the original image signal so as to correspond with the length of afterglow of other colors. One of the suggestions introduces a method of improving the image quality by adding one-field-before image signal as the pseudo afterglow signal to the current-field image signal at a uniform rate (for example, see Japanese Patent Unexamined Publication No. 2002-14647).

Please replace the paragraph beginning at page 2, line 14, with the following rewritten paragraph:

However, the method above—the image signal of the previous field is simply added as the pseudo afterglow signal to the image signal of the current field at a uniform rate—can invite inconveniences. For example, in the display having a bright, white window pattern moving against a dark background, color difference generated in the area having afterglow can increase mismatch feeling in color change. The mismatch rests on the fact that natural afterglow can be seen with exponential attenuation as it goes away from the window pattern, whereas the pseudo afterglow, which is generated by adding one-field before image signal to the image signal of the current field, is no longer dependent on the distance from the window pattern.

Please replace the paragraph beginning at page 8, line 24, with the following rewritten paragraph:

When compression coefficient n is determined to be powers of 2 or to be the reciprocal of powers of 2, the division in average calculation can be done by bit-shifting; accordingly, the circuits for calculation can be simply formed. Each of low-pass filters LPF1, LPF2, and LPF3 performs a simple moving average calculation. Therefore, the extended portion of an output image has, as shown in Fig. 5(c) – 5(e), a linear change. However, combining each output from the characteristically different low-pass filters can generate a pseudo afterglow signal with exponential change in luminance, as shown in the framed area by solid lines in Fig. 5(f).. That is, with no use of a low-pass filter having a complex coefficient matrix, or a cyclic low-pass filter, the structure of the embodiment can produce realistic-looking pseudo afterglow with a simple circuit. Although the exponential functions are approximated by broken lines, viewers see image display with no practical awareness of the approximation method. When a low-pass filter having a complex coefficient matrix is employed, the circuit structure is inconveniently increased in scale. In contrast, the structure having the low-pass filter of the embodiment can be simply formed, which enables the number of tap T to change for each pixel according to movement velocity. With the structure, the extended image including looking-real pseudo afterglow—giving long-tailed afterglow for the area with quick movement, and short-tailed afterglow for the area with a slow movement—can thus be obtained.